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EXAMINER

OSMAN, RAMY M

ART UNIT	PAPER NUMBER
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2157

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/788,695	Applicant(s) CHAPWESKE, JUSTIN F.	
	Examiner RAMY M. OSMAN	Art Unit 2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/10/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. This action is responsive to amendment filed on March 18, 2008, where Applicant amended claims 1,3,4,7,8,14,16, and added claims 19-25. Claims 1-25 are pending examination.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1,3,4,7,8,14,16 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
4. Applicant has not pointed out where the limitations of the new/amended claims are supported in the specification. (See MPEP chapter 2163.03 section (I.) and chapter 2163.04 section (I.) and chapter 2163.06) Applicant is required to provide support for the new/amended claims otherwise they are held as new matter.

Response to Arguments

5. Applicant's arguments/amendments, filed 3/18/2008, with respect to the rejection(s) of claim(s) 1-25 under 102(e) have been fully considered and are partially persuasive. However,

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upon further consideration, a new ground(s) of rejection is made over Young (US Patent No 6,477,522) in view of Byers et al (“Accessing Multiple Mirror Sites in Parallel”, April 1999).

6. Applicant argues that Young fails to teach parallel downloading.

In reply, this is persuasive and a new rejection is presented below.

7. Applicant argues that Young fails to teach prioritizing downloading of data within a file.

In reply, Young does teach this where for example Young discloses prioritizing data within the file for download. The “lowest priority” is interpreted as being the initial file portions (for example, blocks of 500 bits) that are downloaded from the servers. The “highest priority” would be the remaining data within the file that is downloaded from the server with highest throughput, performance, etc. (column 4 lines 39-67 and column 5 lines 13-25)

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-13,15-18,20-25 rejected under 35 U.S.C. 103(a) as being unpatentable over Young (US Patent No 6,477,522) in view of Byers et al (“Accessing Multiple Mirror Sites in Parallel”, April 1999).

10. In reference to claim 1, Young teaches a parallel download system executing on a client computer to control download of data from a plurality of source servers in parallel, the system comprising:

a source scheduler to generate a download schedule to control which source servers will be downloaded from at a current point in time, wherein each of the servers stores a copy of at least a portion of a file containing data (column 1 lines 19-21 & 58-63 and column 4 lines 39-58, Young discloses multiple servers storing the same file, and discloses a client iterating through each server to download a portion of the file from each server);

a prioritization scheduler that tracks the latency and throughput of all channels to the source servers while downloading at least a portion of the data of the file from two or more of the plurality of source servers, wherein based on the latency and throughput of the channels the prioritization scheduler dynamically adjusts the download schedule while downloading the data to control download performance (column 4 lines 39-67 and column 5 lines 13-25, Young discloses monitoring throughput and performance rates of server transmissions while downloading the data. Young further discloses that while performing this monitoring, the download schedule is prioritized based on a highest throughput); and

an I/O dispatcher to produce an output stream to present the downloaded data to one or more external applications or a user (column 3 lines 22-32, presentation to a user is inherent).

Young fails to explicitly teach wherein the data is downloaded in parallel from the multiple servers. However, Bayer teaches simultaneous downloading of portions of data of a single file from multiple servers (Bayer, section II). The benefit of downloading data simultaneously, instead of iteratively or sequentially, is that the overall time needed to transfer the entire file is significantly reduced. It would have been obvious for one of ordinary skill in the art to modify Young by including parallel downloading as per the teachings of Bayer for the purpose of significantly reducing the overall time it takes to transfer a file.

11. In reference to claim 2, Young teaches the parallel download system of claim 1, wherein the source scheduler keeps track of information about each source server and uses that information to decide which source servers to download from (column 4 lines 30-38).

12. In reference to claim 3, Young teaches the parallel download system of claim 1, further comprising a data prioritizer that determines the priority of the data within the file to be scheduled, wherein the data prioritizer specifies an ordering of the data within the file from a highest priority data to a lowest priority data, and wherein different portions of the file are downloaded in parallel from the two or more of the plurality of servers in accordance with the ordering of the data within the file as specified by the data prioritizer and the download schedule as dynamically adjusted by the prioritization scheduler (column 4 lines 39-67 and column 5 lines 13-25, Young discloses prioritizing data within the file for download. The “lowest priority” is interpreted as being the initial file portions (for example, blocks of 500 bits) that are downloaded from the servers. These portions can be downloaded in parallel as taught by Bayer. The “highest priority” would be the remaining data within the file that is downloaded from the server with highest throughput, performance, etc.).

13. In reference to claim 4, Young teaches the parallel download system of claim 3, wherein the prioritization scheduler adjusts the download schedule while maintaining the prioritization the order in which that data will be received (column 4 lines 39-54).

14. In reference to claim 5, Young teaches the parallel download system of claim 1, further comprising one or more channel adapters to translate encoded information from a first format used to transfer the information across a channel to a second format desired for a download (column 3 lines 50-60).

15. In reference to claim 6, Young teaches the parallel download system of claim 1, further comprising a control interface that allows external applications or users to control the behavior of the parallel download system (column 4 lines 21-24).

16. In reference to claim 7, Young teaches the parallel download system of claim 1, further comprising a proportional allocator to determines a proportion of the data that will be transferred from a channel that is currently being scheduled (column 4 lines 39-54).

17. In reference to claim 8, Young teaches the parallel download system of claim 1, further comprising a bulk scheduler to determines which bytes of the data will be scheduled (column 4 lines 39-57).

18. In reference to claim 9, Young teaches the parallel download system of claim 1, further comprising an advanced scheduler that integrates with the proportional allocator to allow data to be allocated during a different time interval than a current time interval (column 4 lines 58-67).

19. In reference to claim 10, Young teaches the parallel download system of claim 9, wherein the advanced scheduler features a sub-interval smoothing component that reduces the burstiness of the availability of high priority data with the proportional allocator (column 4 line 58 – column 5 line 9).

20. In reference to claim 11, Young teaches the parallel download system of claim 1, further comprising a constraint scheduler to ensure that the source scheduler does not attempt to retrieve data that a source server cannot provide (column 4 line 58 – column 5 line 9).

21. In reference to claim 12, Young teaches the parallel download system of claim 1, further comprising one or more channel receivers to read the data from a respective channel and writes it to an I/O dispatcher (column 3 lines 55-65).

22. In reference to claim 13, Young teaches the parallel download system of claim 1, further comprising an integrity verification engine to determine that the desired data is received intact and that none of the channels were providing data that is either corrupt or a different version of the content that is desired (column 4 line 58 – column 5 line 9).

23. In reference to claim 15, Young teaches the parallel download system of claim 13, further comprising a corruption repair engine to repair data corruption detected by the integrity verification engine (column 5 lines 1-9).

24. In reference to claim 16, Young teaches the parallel download system of claim 1, further comprising one or more channel connector to establish a new channel to the scheduled source server (column 4 lines 54-67).

25. In reference to claim 17, Young teaches the parallel download system of claim 1, wherein the source scheduler ranks the source servers according to one or more of: external ranking input received from a user or an administrator or an external ranking service; a throughput associated with each source server; a latency associated with each source server; a number of network hops to the source server from the parallel download system; a geographical location of each source server relative to the parallel download system; and a channel cost associated with the channel from the parallel download system to each source server (column 4 line 58 – column 5 line 9).

26. In reference to claim 18, Young teaches the parallel download system of claim 3, wherein the prioritization scheduler schedules ranges of bytes to be downloaded (column 5 lines 21-25).

27. In reference to claims 20-21,25, these claims are minor variations of claims 2-4 and are rejected based upon the same rationale as used to reject claims 2-4.

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28. In reference to claims 23-24, Young teaches the system of claim 21 further comprising wherein the data prioritizer adjusts the ordering of the data within the file based on the detected corruption that the corruption repair engine will repair. (column 4 lines 39-67 and column 5 lines 13-25) Young fails to explicitly teach a corruption repair engine that detects and repairs corruption in previously downloaded portions of the data within the file. However, data corruption detection and data corruption repair are old and well known in the art as a means of ensuring data integrity during network transmissions. It would have been obvious for one of ordinary skill in the art to modify Young by including data corruption detection and repair for the purpose of ensuring data integrity during network data transmissions.

29. Claims 14,19 rejected under 35 U.S.C. 103(a) as being unpatentable over Young (US Patent No 6,477,522) in view of Byers et al (“Accessing Multiple Mirror Sites in Parallel”, April 1999) in further view of Merkle (US Patent No 4,881,264).

In reference to claim 14 and 19, Young teaches the parallel download system of claim 13. Young fails to explicitly teach wherein the integrity verification engine utilizes an iterative hash construct, such as a Merkle Hash Tree. However, Merkle teaches iterative hash constructs within one way hash functions that are used in digital signatures for message verification (Merkle, column 14 lines 30-43). This way it is possible to verify that it was the sender who really sent the message and that the message is in fact the message sent from the sender (Merkle, column 1 lines 11-20).

It would have been obvious for one of ordinary skill in the art to modify Young including an integrity verification engine that utilizes an iterative hash construct as per the teachings of

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Merkle, so that digital signature can be used to verify that it was the sender who really sent the message and that the message is in fact the message sent from the sender.

Conclusion

30. The above rejections are based upon the broadest reasonable interpretation of the claims. Applicant is advised that the specified citations of the relied upon prior art, in the above rejections, are only representative of the teachings of the prior art, and that any other supportive sections within the entirety of the reference (including any figures, incorporation by references, claims and/or priority documents) is implied as being applied to teach the scope of the claims.

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached Form 892.

32. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RAMY M. OSMAN whose telephone number is (571)272-4008. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ramy M Osman/
Examiner, Art Unit 2157

/Ario Etienne/

Supervisory Patent Examiner, Art Unit 2157